SECTION 05151

CABLE TRELLIS ASSEMBLY

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\*\* NOTE TO SPECIFIER \*\* Seco South Railing & Cable Assemblies; stainless steel cable trellis.  
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This section is based on the products of Seco South Railing & Cable Assemblies, which is located at:  
2111 34th Way  
Largo, FL 33771  
Tel: 727-536-1924  
Fax: 727-539-6314  
Email: [request info (sales@secosouth.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Seco+South+Railing+%26+Cable+Assemblies&coid=35411&rep=&fax=727-539-6314&message=RE:%20Spec%20Question%20(05151sec):%20%20&mf=)  
Web: <https://www.secosouth.com>   
   
[ [Click Here](https://www.arcat.com/arcatcos/cos35/arc35411.html) ] for additional information.  
  
For nearly two decades, SECO SOUTH has been the designer's choice for cable railing systems. Our cable railing systems have been specified by design firms all over the world on projects such as The Houston Astrodome, Bank One Ballpark, Florida Aquarium, Philips Arena and Gold's Gym just to name a few. Why do designers choose our systems? Economical; Extremely transparent; Made from type 316 stainless steel; Last for many years with very low maintenance

1. GENERAL
   1. SECTION INCLUDES
      1. Stainless steel cable trellis system.
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 02930 - Plants: Provision of climbing plants including soil preparation, planting, and maintenance.
    2. Section 03300 - Cast-In-Place Concrete: Requirements for placement of spacers and anchors in concrete.
    3. Section 04800 - Masonry Assemblies. Requirements for placement of spacers and anchors in masonry.
    4. Section 05500 - Metal Fabrications: Metal posts and framework to receive spacers and anchors.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Iron and Steel Institute (AISI) - Steel Product Manual; Stainless and Heat Resisting Steel.
    2. ASTM International (ASTM):
       1. ASTM A 276 - Stainless and Heat-Resisting Steel Bars and Shapes.
       2. ASTM A 380 - Practice for Cleaning and Descaling Stainless Steel Parts, Equipment and Systems.
       3. ASTM A 492 - Specification for Stainless Steel Rope Wire.
       4. ASTM A 555 - Stainless Steel Wire.
       5. ASTM A 582 - Specification for Free-Machining Stainless and Heat-Resisting Steel Bars.
       6. ASTM B 912 - Specification for Passivation of Stainless Steels Using Electropolishing.
       7. ASTM F 1145 - Specification for Turnbuckles, Swaged, Welded, Forged.
    3. MIL-C-5688 - Pre-Stretching and Proof-Testing of Wire Rope Assemblies.
  1. DESIGN / PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Seco South can provide engineering assistance for the stainless steel wire rope trellis system including supporting posts, frames, and anchorage and method to comply with applicable codes and regulations. System shall support the weight of the plants, wind load on the plant surface, weight of dew or rain, snow and ice loads, and the weight of the trellis structure. Consult load tables contained in the manufacturer's product data for required data. The following paragraphs identify typical code conditions, edit as required to suit actual requirements. Delete if data is indicated on the Drawings.

* + 1. Structural Requirements: Provide stainless steel trellis systems capable of withstanding the effects of gravity and applied loads and stresses within limits and under conditions indicated on the Drawings:
       1. Components: Design and size to withstand dead and live loads of components, plants, rain, snow and ice and loads caused by positive and negative wind pressure acting normal to plane of trellis as calculated in accordance with applicable code.
    2. Trellis systems shall accommodate expansion and contraction of metal components without causing undue stress, buckling, opening of joints, and distortion.
    3. Supports and hardware shall withstand loads encountered without excessive deflection or distortion when cables are tensioned to required amounts required to conform to applicable building codes.
  1. SUBMITTALS
     1. Submit under provisions of Section 01300.
     2. Product Data: Provide manufacturer's standard catalog data for specified products demonstrating compliance with referenced standards. Provide list of fittings being provided with descriptions, load capabilities, and either photographs or drawings for each type. Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Submit Shop Drawings for fabrication and installation. Include the following:
        1. Plans, elevations, and detail sections.
        2. Indicate materials, methods, finishes, fittings, fasteners, anchorages, and accessory items.
        3. Provide setting diagrams and templates for anchorages, sleeves, and bolts to be installed by others.
        4. Where materials or fabrications are indicated to comply with design loadings, include material and safety factor properties, and other information needed for structural analysis.
     4. Structural Calculations: Submit manufacturer's design data, including structural calculations prepared by qualified professional engineer.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Verification Samples: For connections and terminations to be used, one full sized sample of each. For type of cable to be used, 12 inches (304 mm) long sample, representing actual product.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications:
        1. Company specializing in manufacturer of stainless steel wire rope, fittings, and other stainless steel components with 10 years minimum successful experience.
     2. Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Locate in areas designated by Architect.
       2. Size: Minimum of 10 square feet (1 sm).
       3. Do not proceed with remaining work until workmanship is approved by Architect.
       4. Rework mock-up as required to produce acceptable work.
       5. Retain mock-up during construction as quality standard.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two choices for final disposition of mock-up.

* + - 1. Remove and legally dispose of mock-up when no longer needed.
      2. Incorporate mock-up into final construction.
    1. Pre-installation Meetings: Conduct meetings including Contractor, Architect, fabricator, installer and other subcontractors whose work involves cable trellis system to verify project requirements, framing and support conditions, mounting surfaces and manufacturer's installation. Comply with Division 1 requirements.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
     2. Handle and store products according to manufacturer's recommendations. Leave products wrapped or otherwise protected and under clean and dry storage conditions until required for installation.
     3. Exercise care not to scratch, mark, dent, or bend metal components during delivery, storage, and installation.
  2. PROJECT CONDITIONS
     1. Verify actual openings by field measurements before fabrication; show recorded measurements on shop drawings.
     2. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Seco South Railing & Cable Assemblies, which is located at: 2111 34th Way; Largo, FL 33771; Tel: 727-536-1924; Fax: 727-539-6314; Email: [request info (sales@secosouth.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Seco+South+Railing+%26+Cable+Assemblies&coid=35411&rep=&fax=727-539-6314&message=RE:%20Spec%20Question%20(05151sec):%20%20&mf=); Web: <https://www.secosouth.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01600.
  1. CABLE TRELLIS SYSTEM

\*\* NOTE TO SPECIFIER \*\* Seco South's cable trellis systems are a perfect solution for supporting foliage or as a decorative statement for any building. These systems can be fastened horizontally or vertically to any type of wall or structure. The all-stainless steel construction makes these systems environmentally safe for foliage and other plant life as well as impervious to salt air and additives sometimes used in sprinkler systems.

* + 1. Provide stainless steel climbing plant trellis structures and mounting as indicated on the Drawings. Manufacturer/Contractor shall engineer and fabricate components and assemblies for installation.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs based on trellis system required.

* + 1. Trellis Systems:
       1. Product: System 2000-60 (Light Duty Trellis) as manufactured by Seco South Inc.
       2. System: Rectangular grid of cables supported by wall mounted stand-offs and secured by cross clamps to support vegetation screening.
       3. Cable: 1/8 inch (3 mm) diameter with swage studs at each end of the cable.
          1. Stainless Steel Wire: ASTM A 492 Type 316.
       4. Swage Stud: Model 553 Short Swage Stud Terminal - Model 553-1/8-1/4.
       5. Tensioning Nut/Cap:
       6. Wall Mounted Stand Off: 3 inch (75 mm) or 4 inch (102 mm) length off the wall.
          1. Cable Size 1/8 inch (3 mm).
       7. Cable Cross Clamp: Fixes the 90 degree intersection of cables to be fixed by locking the cables in the barrel of the clamp with a threaded set screw.
          1. Cable Size 1/8 inch (3 mm).
    2. Trellis Systems:
       1. Product: System 2000-65 (Heavy Duty Trellis) as manufactured by Seco South Inc.
       2. System: Rectangular grid of cables supported by wall mounted stand-offs and secured by cross clamps to support vegetation screening.
       3. Cable: 3/16 inch (4.8 mm) diameter with swage studs at each end of the cable.
          1. Stainless Steel Wire: ASTM A 492 Type 316.
       4. Swage Stud: Model 553 Short Swage Stud Terminal - Model 553-3/16-5/16.
       5. Wall Mounted Stand Off: 5 inch (127 mm) length off the wall.
          1. Cable Size 3/16 inch (4.8 mm).
       6. Cable Cross Clamp: Fixes the 90 degree intersection of cables to be fixed by locking the cables in the barrel of the clamp with a threaded set screw.
          1. Cable Size 3/16 inch (4.8 mm).
  1. FINISH
     1. After fabrication, clean and de-scale stainless steel wire rope, fittings, and other components in accordance with ASTM A 380.
     2. Finish components with AISI No. 4 brushed satin finish in accordance with ASTM B 912.
  2. FABRICATI0N
     1. Tolerances: Verify dimensions on site prior to shop fabrication.
     2. Fabricate stainless steel in accordance with AISI Steel Product Manual and the manufacturer's requirements.
     3. Shop fabricate to designs indicated on Drawings and to meet performance requirements specified. Shop fabricate fittings, interfacing parts and assemblies so that field cutting adjustments are not necessary.
     4. Coordinate requirements, dimensions and spacings of trellis system to ensure required factory drilled holes in supporting framework are correctly located.
     5. Make exposed joints butt, flush, and hairline.
     6. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

1. EXECUTION
   1. EXAMINATION
      1. Before beginning installation, verify that conditions installed under other sections are acceptable for installation of cable trellis systems in accordance with manufacturer's installation instructions.
      2. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate Sections.
      3. Verify supporting system for stainless steel wire rope trellis is prepared for attachment of anchors, fittings, wire rope, and wire netting and transfer of calculated loads.
      4. If conditions are the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Verify alignment, support dimensions, and tolerances are correct.
      2. Inventory components to ensure all required items are available for installation. Inspect components for damage. Remove damaged components from site and replace.
   3. INSTALLATION
      1. Install wire rope trellis system in accordance with manufacturer's instructions and the approved shop drawings.
      2. Provide anchorage devices and fittings to secure to in-place construction; including threaded fittings for concrete inserts, toggle bolts and through-bolts.
      3. Install infill plumb, level, square, and rigid without kinks or sags.
      4. Anchor trellis system to mounting surfaces as indicated on the Drawings.
      5. Separate dissimilar materials with bushings, grommets or washers to prevent electrolytic corrosion.
      6. Use manufacturer's supplied cable hardware.
      7. Ensure cables are clean, parallel to each other, and without kinks or sags.
      8. Tension cable with hand or hydraulic equipment so that no slack is visible.
      9. After final adjustment provide tamper resistant lock tight materials on all fittings.
   4. ADJUSTING AND CLEANING
      1. Adjust wire rope tension and connecting hardware.
      2. Remove temporary coverings and protection of adjacent work areas. Clean installed products in accordance with manufacturer's instructions before owner's acceptance.
      3. Do not use abrasive cleaners.
      4. Remove from project site and legally dispose of construction debris associated with this work.
   5. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.
      3. Protect installed products and finished surfaces from damage during construction.
      4. Replace defective or damaged components as directed by Architect.

END OF SECTION